



DELTA Africa Learning Research Programme: Inception Phase Report (Feb-Jul, 2016)

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ACRONYMS

AAS	African Academy of Sciences
AESA	Accelerating Excellence in Science in Africa
AFIDEP	African Institute for Development Policy
AGM	Annual General Meeting
CRU	Capacity Research Unit
DELTA	Developing Excellence in Leadership, Training and Science
DFID	Department for International Development
IDeAL	Initiative to Develop African Research Leaders
LRP	Learning Research Programme
LSTM	Liverpool School of Tropical Medicine
M&E	Monitoring & Evaluation
PI	Principal Investigator
RMSS	Research Management & Support Systems

1. INTRODUCTION

The Wellcome Trust and the Department for International Development (DFID) 'Developing Excellence in Leadership, Training and Science (DELTA)' initiative aims to improve health in Africa through research driven by the most urgent regional challenges. Eleven DELTA research programmes are currently funded, each involving a consortium of world class researchers led by an African research institution and all are committed to training the next generation of researchers through programmes that support women in science, create opportunities for masters, doctoral and post-doctoral candidates and provide mentorship. By supporting the training of scientists within the continent, DELTA Africa is seeking to stem the 'brain drain' of the best African scientists and promote Africa-led development of world class research leaders to solve the continent's most pressing health needs. The scheme will run for five years, but fits into a longer term strategy with a 20 year time horizon.

The Learning Research Programme (LRP), led by the Capacity Research Unit (CRU), the Liverpool School of Tropical Medicine (LSTM), will work alongside DELTA Africa consortia to produce research-based learning about how to train and develop world-class researchers, foster their careers and collaborations, and promote research uptake. Specifically, the LRP will draw on the collective experience of the DELTA Africa initiative to generate and share robust evidence in the following three thematic areas:

1. promote **equitable career pathways** for internationally competitive African researchers including women and other under-represented groups
2. improve strategies for, and the quality of, **institutionalised research training** and identify synergies among African and partner (public and private) institutions
3. encourage researchers to do **research that is needed and contributes to socio-economic development**

The LRP team expect to contribute to the success of the DELTA Africa initiative by providing relevant findings to consortia members during the course of their respective project implementation as well as advancing current understanding of best practice in global health research capacity strengthening. The LRP will be led by the Liverpool School of Tropical Medicine in close partnership with the Alliance for Accelerating Excellence in Science in Africa (AESA), the African Institute for Development Policy

(AFIDEP) and all DELTA Africa consortia. Findings from the DELTA LRP will be further assessed alongside those of similar learning programmes carried out by the LSTM, including for the Royal Society – DFID Africa Capacity Building Initiative, to allow cross-learning from multiple consortia-based research capacity strengthening initiatives.

The DELTA LRP has received initial funding for a six-month inception phase (Feb-Jul, 2016) following which, if successfully completed, more extensive funding to initiate the collection, analysis and reporting of data relevant to the three thematic areas will be awarded for a four year period (Aug 2016 – Jul 2020). This report presents an up-to-date review of project outcomes achieved during the six-month inception phase. The report is structured according to the primary objectives of the inception phase as described in the approved LRP proposal, including the sub-sections: project staffing and support; PhD student recruitment; proposed workplan, milestones and deliverables; and communication and dissemination plan.

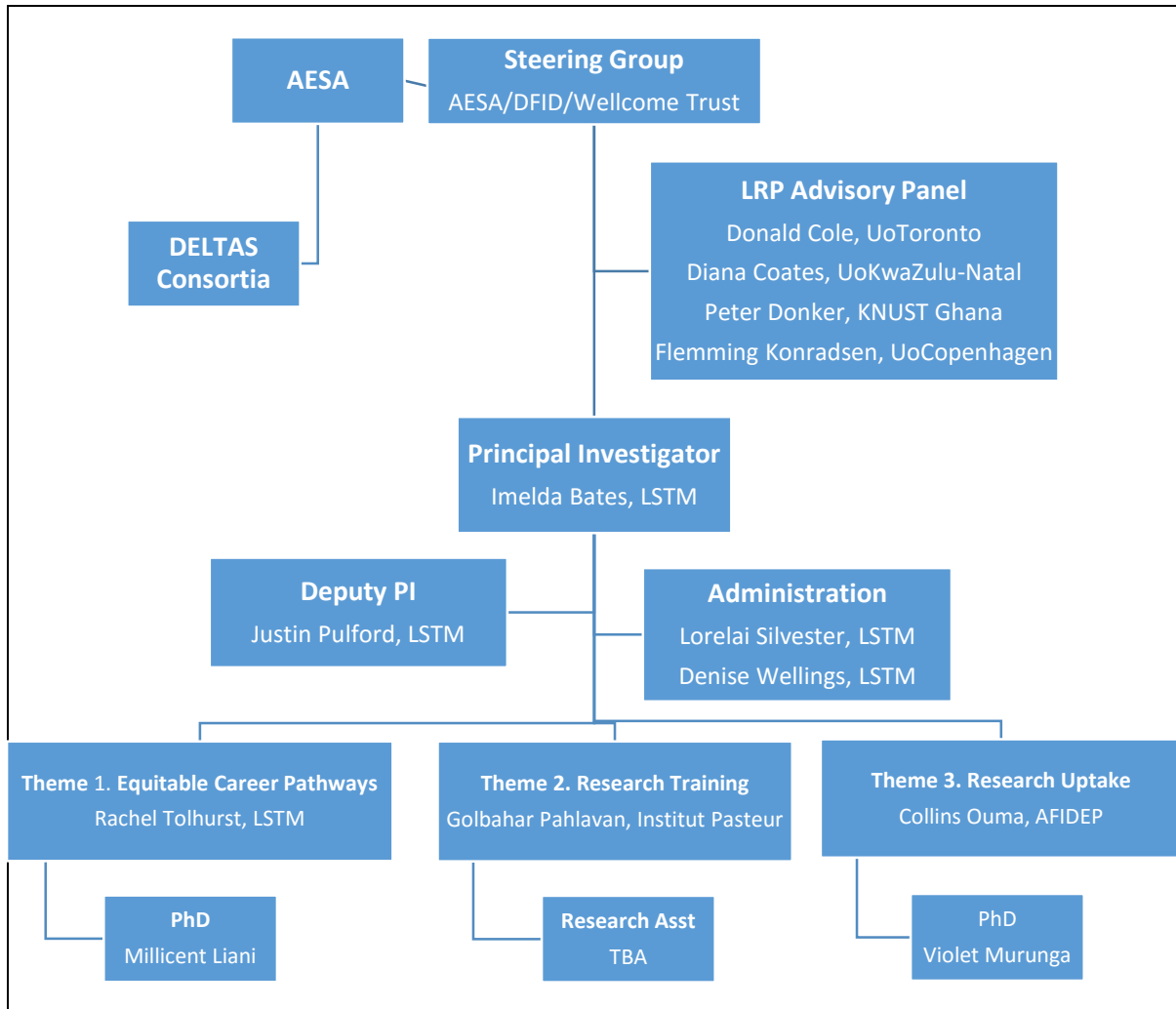
2. PROJECT STAFFING & SUPPORT

Key aims of the inception phase were to finalise staffing structures within the LSTM DELTA LRP team, formalise roles and responsibilities with all LRP team members, including team members from partnering organisations, define terms of references for the LRP advisory board and for the partnership between LSTM and AESA and finalise contracts where required.

Figure 1 presents the latest version of the LRP organogram. As can be seen, all staff positions and partners have been identified with the exception of the research assistant for Theme 2 (Research Training). LSTM advertised the research assistant position over a four week period across May and June and had anticipated making a formal offer to a suitable candidate in late July, 2016, following short-listing and interviews (job description is listed in Annex 1). As stated in the job description, the research assistant position requires a francophone speaker based primarily in Liverpool, UK, with up to a six-week placement at the Institut Pasteur, France, per annum. Despite including the job-advert on all standard LSTM recruitment forums and circulating the position description across our collective networks (including those of the Institut Pasteur), the advertisement failed to attract a sufficient response. Only two applications for the research assistant position were received, possibly because recruitment coincided with the Brexit referendum, and neither were considered suitable for interview. LSTM have now re-advertised the position for an additional four week period both inside and outside

of the European Union (the original advertisement was restricted to citizens of the European Union only). We remain hopeful of making an appointment within the final quarter of 2016.

Figure 1. LRP Organogram



Annex 2 presents the defined roles and responsibilities for all project team members, as well as the Terms of Reference for advisory panel members and the LSTM-AESA partnership.

3. PHD STUDENT RECRUITMENT

The DELTA LRP includes funding to support two PhD scholarships. As noted in the project workplan (below), the ‘equitable career’ and ‘research uptake’ thematic areas are designed to be completed

within the framework of a PhD project driven by the respective LRP PhD candidates under the supervision of senior project members. The two PhD positions were advertised for a four week period during May, 2016. As noted in the position descriptions (Annex 3), the scholarships were only open to African nationals and required the successful applicants to be based at an African academic/research institution for the majority of the PhD programme (LSTM ‘off-site’ PhD scholarship). A total of 120 applications, from 17 African nations, were received for the two scholarships. Figures 2 and 3 present the number of applicants for each position by country and by sex.

Figure 2. Number of applicants for the ‘Equitable Careers’ PhD scholarship by country and sex

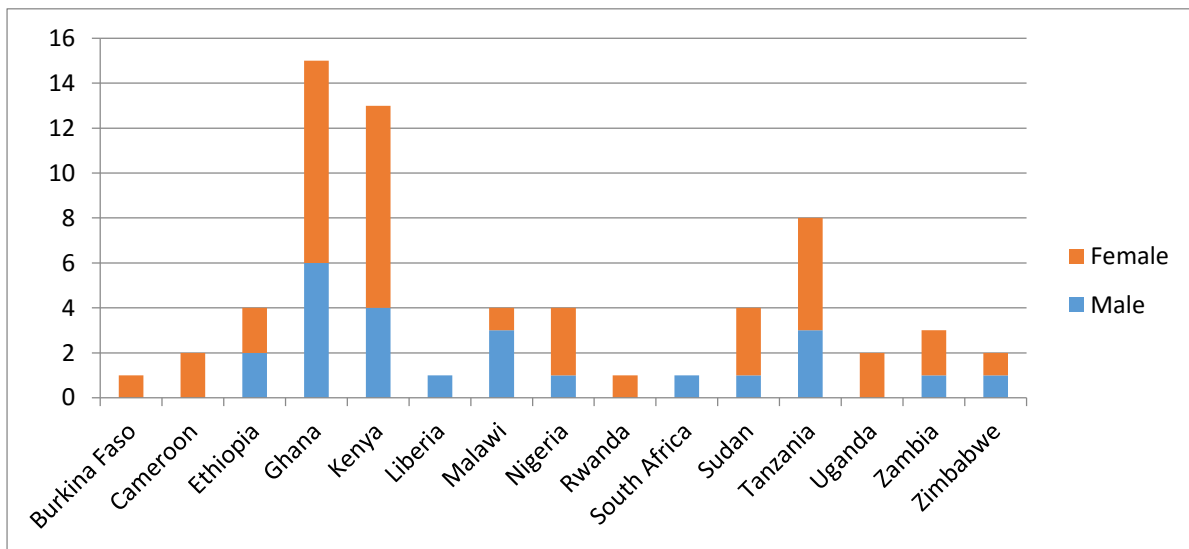
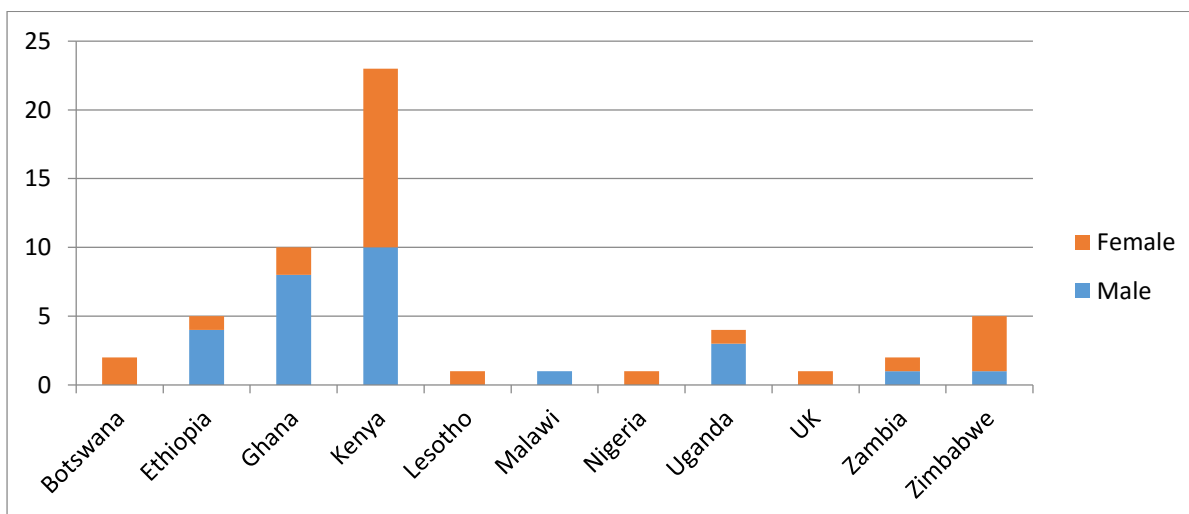


Figure 3. Number of applicants for the ‘Research Uptake’ PhD scholarship by country and sex



The LRP Deputy PI, Dr Justin Pulford, completed an initial screen of all applications and created a 'long list' of the 20 most suitable applicants for each position. A selection panel, consisting of LSTM, AFIDEP and AESA representatives, then proceeded to identify the top five applicants for each scholarship. The top five applicants for both scholarships were then invited to a formal interview at the Intercontinental Hotel, Nairobi, 4th July, 2016 (scheduled to coincide with the DELTAS AGM). The interview panel again consisted of LSTM, AFIDEP and AESA representatives and each applicant was required to complete a 15 minute written task designed to assess analytical ability and quality of written English as well as a structured 30 minute interview. Of the 10 interviewees, four were from Kenya, three from Ghana, and one each from Ethiopia, Tanzania and Zimbabwe. Seven were female and three male. At the conclusion of the interviews, the interview panel met and unanimously agreed on the top two candidates for each scholarship. The interview panel further agreed that all four of these candidates were exceptional PhD prospects. The final decision for candidate selection (from the top two for each position) was made by the primary supervisor for the respective PhD scholarship. Both of the preferred applicants, Ms Millicent Liani (Equitable Careers) and Ms Violet Murunga (research Uptake), accepted the scholarship offer in principle. LSTM are currently working through the formal PhD registration processes which should be concluded within a 3-month period (see timeline, next section).

In a further development, LSTM in collaboration with the DELTAS Africa IDeAL consortium are currently exploring the possibility of extending complementary PhD scholarship opportunities to the two applicants (one each for the equitable career and research uptake thematic areas) who were rated exceptional PhD prospects, but for whom a formal offer was not initially made, during the LRP scholarship recruitment process. If successful, this will increase the outputs and learning opportunities from the LRP as well as contributing to the IDeAL's aims of developing the careers of the most promising young African scientists across a broad range of health disciplines.

4. PROPOSED WORKPLAN, MILESTONES & DELIVERABLES

The workplans for each of the three DELTAS LRP thematic areas are discussed below along with the proposed deliverables and projected timeline. However, the workplans remain provisional at present as PhD appointments have yet to be finalised and their input will be essential to informing the final study objectives. The respective study designs will not be finalised until the study objectives have been

agreed. Every effort will be taken to ensure data collection activities complement (and do not duplicate) routine M&E reporting requirements of the DELTA consortia.

THEME 1: EQUITABLE CAREER PATHWAYS.

Female scientists are increasingly under-represented at each stage of the scientific career ladder (i.e. the 'leaky pipeline'):¹ only 48% of women were still working in academia three years after their Trust-funded PhD compared with 93% of men.² Women are significantly under-represented among African academic staff and decision-making bodies.³ Little is known about career outcomes for other under-represented groups (e.g. people with disabilities; those for whom English is not their first language; ethnic, religious or regional minorities). Research career tracks favour traditional male career patterns creating challenges in balancing career progression with child-rearing, career breaks and caring roles.⁴ Compared to men, women have less professional social capital, less international mobility and more gender-based harassment.⁵ Lack of physical access and support for people with disabilities is common. This theme will provide information about how to improve and track research career equity.

Potential research questions

Are there any biases in the current criteria and processes for selecting and promoting individuals with potential to be effective and excellent researchers and/or research leaders?

How do the peer networks created by PhD/Masters cohorts function both during and after training, and can they be utilised to promote equity?

Where are the critical leak points along the career pathway? What strategies could help under-represented groups to transition across these points successfully?

How do institutional environments, including values, policies, and their implementation shape inequities in career progression and how can these be improved to promote equity?

What are the 'informal rules' in intersectional power hierarchies, how do these limit equitable progression and what strategies could improve this?

¹ Thege B, et al. Pathways to Career and Success for Women in Science. Springer 2014

² http://www.wellcome.ac.uk/stellent/groups/corporatesite/@msh_peda/documents/web_document/wtp056700.pdf

³ Johnson AT. Performing and defying gender: An exploration of the lived experiences of women higher education administrators in sub-Saharan Africa. Educational Management Administration & Leadership. 2014 42(6),835–850

⁴ Xie, Y., and K. A. Shauman. 2003. Women in Science: Career Processes and Outcomes. Cambridge: Harvard University Press.

⁵ Miller BP, et al. Gender and Science in Developing Areas: Has the internet reduced inequality? Social Science Quarterly, 87(3), 2006.

Workplan

Activities will be completed within the frame of a theme-specific PhD project. Study objectives will be determined by the PhD candidate in consultation with her supervisor, the LRP principal investigators, the LRP advisory board panel and AESA. The study objectives will be further designed to complement existing DELTAS data sources as well as the underlying 'Theory of Change'. It is anticipated that the final study objectives will be broadly consistent with the research questions presented above. Given budget and time constraints, data collection is likely to consist of a mix of the following activities: secondary analysis of routinely reported data sources; qualitative investigation in purposively selected consortia or with purposively selected individuals within consortia and strategic partners/audiences of consortia; and self-administered surveys conducted with consortia members and/or strategic partners/audiences of consortia. The study design will be further influenced by the underlying intent to provide project deliverables during the course of the DELTAS initiative and by the stipulations of the LSTM PhD programme. The proposed activities, deliverables and timeline are presented in Figure 4.

PhD Supervisors: Dr Rachel Tolhurst (LSTM), Dr Stefanie Gregorius (LSTM), Supervisor based at Nairobi University to be identified. **PhD Candidate:** Ms Millicent Liani (Kenya)

THEME 2: RESEARCH TRAINING.

Most training for researchers and PhD students in Africa is provided through international projects and focuses on technical skills, though the importance of 'soft' skills (e.g. leadership, supervision, mentorship, communication) is increasingly recognised.⁶ We found common gaps in African universities' research training capacity including insufficient and/or inexperienced supervisors, unstructured research skills training, insufficient infrastructure for training by doing research and inadequate development of critical thinking skills (case study 6.1).⁷ Despite African universities' limited doctoral training capacity, unstructured programmes and viva delays, many require lecturers to have a PhD. Unless research training quality and research infrastructure improve to allow productive scientific careers aligned with expertise and experience, PhD qualifications risk becoming de-valued with detrimental consequences for long-term research prospects. This theme will identify research training needs and existing courses (including on-line) for researchers at all career stages, document

⁶ Cole DCC et al. Mentoring health researchers globally: Diverse experiences, programmes, challenges and responses, *Global Public Health*, 2015, DOI:10.1080/17441692.2015.1057091

⁷ Bates I, et al Assessing and strengthening African universities' capacity for doctoral programmes. *PLOS Medicine* 2011,8(9):e1001068.

quality and opportunities for synergy, and promote a systematic approach to embedding high-quality courses within African institutions.

Potential research questions

What training do researchers want and need? How can critical thinking skills be nurtured?

What is the availability of research training courses (Anglo- and Franco-phone) across Africa?

What is the quality of these courses and how can it be measured?

How can efforts to provide research training be synergised (possibly through AESA) and duplication avoided?

What are the barriers to productive scientific collaborations across Africa?

Mentoring: How can the evaluation of scientific careers take into account parameters other than only publication/impact factor-based ones and include contributions to the development of excellence and leadership: e.g. career development of the PhDs supervised, systematic tracking and development of metrics including those reaching leadership positions.

Which partnerships should be sought in order to forecast future demand for scientific training and expertise?

Workplan

Activities within this theme will be completed by a project-specific research assistant under the supervision of senior researchers from LSTM and the Institut Pasteur. Study objectives will be determined by the senior researchers, the LRP principal investigator, the LRP advisory board panel and AESA. However, it is anticipated that the final study objectives will be broadly consistent with the research questions presented above. Data collection is likely to consist of a mix of the following activities: a stocktake of relevant training courses/programmes in Anglophone Africa (to complement existing record already obtained for Francophone Africa); secondary analysis of routinely reported data sources; qualitative investigation in purposively selected consortia or with purposively selected individuals within consortia and strategic partners/audiences of consortia; and self-administered surveys conducted with consortia members and/or strategic partners/audiences of consortia. The study design will be further influenced by the underlying intent to provide project deliverables during the course of the DELTAS initiative (rather than at its conclusion). The proposed activities, deliverables and timeline are presented in Figure 4.

Research Assistant Supervisors: Dr Justin Pulford (LSTM), Dr Golbahar Pahlavan (Institut Pasteur).

Research Assistant: Recruitment currently ongoing.

THEME 3: RESEARCH UPTAKE

In Africa research uptake for decision-making is weak due to supply- and demand-side bottlenecks. Much research is untimely, not focused on national socio-economic priorities and irrelevant to knowledge needs of decision-makers and the public because of limited interaction between producers and users of research when conceptualizing research questions.⁸ Supply-side research is fragmented across many scientific journals and researchers lack skills to synthesise and package it appropriately for decision-makers. Research competes with values, politics and personal interests to inform policy decisions and policymakers may lack motivation and skills to access, appraise and apply research findings.^{9,10} There is limited evidence about the most effective strategies (e.g. social media, private sector partnerships) to close the gap between research generation, and policies and programmes. This theme will assess the effectiveness of DELTAS consortia focusing on public health issues, in improving public awareness and research and evidence-informed policy making by decision-makers. For consortia focusing on basic science and technology, LRP emphasis will be on assessing effectiveness of activities to promote uptake of new skills and knowledge.

Potential research questions

How are national health research priorities incorporated (or not) into DELTAS health research programmes?

What mechanisms work best for research uptake and what is the strength of evidence?

What mechanisms work best for uptake of new skills and knowledge and what is the strength of evidence?

What are the contextual and individual factors that have enabled some researchers to be highly successful in influencing policy and research uptake?

⁸ Innvaer, S et al Health policy-makers' perceptions of their use of evidence: a systematic review. *Journal of Health Services Research & Policy* 2002,7(4),239–244

⁹ WHO (2007) Sound Choices: Enhancing Capacity for Evidence-Informed Health Policy. http://www.who.int/alliance-hpsr/resources/Alliance_BR.pdf

¹⁰ Oliver, K., et al A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC Health Services Research* 2014,14:2

Workplan

Activities will be completed within the time frame of a theme-specific PhD project. The PhD candidate in consultation with his/her supervisor, the LRP principal investigators, the LRP advisory board panel and AESA, will determine study objectives. The study objectives will be further designed to complement existing DELTAS data sources as well as the underlying 'Theory of Change'. It is anticipated that the final study objectives will be broadly consistent with the research questions presented above. Given budget and time constraints, data collection is likely to consist of a mix of the following activities: secondary analysis of routinely reported data sources; qualitative investigation in purposively selected consortia or with purposively selected individuals within consortia and strategic partners/audiences of consortia; and self-administered surveys conducted with consortia members and/or strategic partners/audiences of consortia. The study design will be further influenced by the underlying intent to provide project deliverables during the course of the DELTAS initiative (rather than at its conclusion) and by the stipulations of the LSTM PhD programme. The proposed activities, deliverables and timeline are presented in Figure 4.

PhD Supervisors: Prof. Collins Ouma (AFIDEP), Dr. Rose Oronje (AFIDEP), Dr. Justin Pulford (LSTM).

PhD Candidate: Ms Violet Murunga (Kenya)

Figure 4. LRP Activities & Deliverables Timeline (projected start date August 2016)

Activities	Year 1	Year 2	Year 3	Year 4
Theme 1: Equitable Careers				
PhD registration	■			
Protocol development	■			
Ethics submissions	■			
Data collection		■	■	
Data analysis & writing		■	■	
Thesis first draft			■	
Thesis revision				■
Thesis submission				■
Theme 2: Training				
Protocol development	■			
Data collection	■	■	■	
Data analysis & writing		■		■
Theme 3: Research Uptake				
PhD registration	■			
Protocol development	■			
Ethics submissions	■			
Data collection		■	■	
Data analysis & writing			■	
Thesis first draft				■
Thesis revision				■
Thesis submission				■
Deliverables				
Quarterly newsletters	■	■	■	■
Annual 'learning' report		■	■	■
Interim 'aims & outcomes' rep			■	■
DELTA AGM presentation				■
Conference presentation		■		■
LRP Publications*		■	■	■
Final report				■

* Refer to 'publications list' for proposed publications and order of submission

5. COMMUNICATION & DISSEMINATION PLAN

The project team anticipate producing a range of outputs during the course of the LRP, including (as stated in the proposed timeline) quarterly newsletters, annual 'learning' reports, presentations at DELTA AGM and relevant conferences, LRP publications in peer-reviewed journals and a final technical report. The project team, in collaboration with AFIDEP, Institut Pasteur and AESA have developed the provisional publication plan listed in Figure 5 below.

Figure 5. Proposed DELTA LRP Publications*

Theme	Proposed Title	Proposed Submission Date
Equitable Careers	Enablers and barriers to equitable career advancement in science: A review of the international literature	August 2017
Equitable Careers	Identifying critical points in the 'leaky pipeline' of research careers and strategies to support career progression by under-represented groups in African research institutions: a mixed-methods study	August 2018
Equitable Careers	Understanding the role of institutional environments and informal rules in intersectional power hierarchies in shaping equity in research career progression in African academic institutions	June 2019
Training	The self-reported research training priorities of African scientists	June 2018
Training	Training the next generation of African researchers: overview of existing programs	June 2018
Training	From PhD to PI: metrics for research and public health training and leadership	June 2019
Research Uptake	Enablers and barriers to research uptake in Africa: A review of the published literature	August 2017
Research Uptake	The contextual and individual factors that enable successful use of research evidence to influence policy and research uptake in Africa	August 2018
Research Uptake	Mechanisms and strengths of evidence that promote research uptake in Africa	June, 2019
Overarching	Using consortiums to strengthen health research capacity in Africa: Views from consortia members	December 2018
Overarching	Aims and outcomes of the DELTA Africa Learning Research Programme and recommendations for future work	August 2019

* All titles are provisional and may change pending study design and outcomes.

Authorship on all papers will follow standard conventions for peer-reviewed publication in academic journals. In addition, a supplementary budget is currently under review to support physical attendance at DELTA AGM and International Conferences during the course of the LRP for the purpose of disseminating key project findings as they emerge. All 'learning' reports will be submitted to Wellcome Trust, DFID and AESA on an annual basis (refer to timeline for projected dates). As stated in the respective Terms of Reference, AESA will be invited to comment on all proposed publications prior to submission and, pending Wellcome Trust and DFID approval, AESA will also assume responsibility for disseminating key findings across DELTA consortia and other relevant African Academy of Sciences (AAS) and international networks.

6. POTENTIAL RISKS & MITIGATION

Potential risks are listed below along with mitigating actions.

PhD students do not complete their work to a satisfactory level or do not adhere to the project timeframes:

Two of the three LRP thematic areas (equitable careers and research uptake) have been developed as PhD projects and their successful completion will in large part rely on the performance of the respective PhD candidates. Accordingly, a rigorous selection process was employed to ensure competent, committed and professional PhD candidates were recruited. The two successful candidates, Ms Millicent Liani and Ms Violet Murunga, have considerable professional experience, impressive academic records, demonstrated excellent written and verbal communication skills and are following career pathways appropriate to their respective thematic areas. The interview panel, comprised of representatives from LSTM, AESA and AFIDEP, unanimously supported their appointments. In addition, the 'equitable careers' PhD candidate, Ms Millicent Liani, will be directly supervised by the thematic leader, Dr Rachel Tolhurst, and her co-supervisor, Dr Stefanie Gregorius, is line-managed by Prof. Imelda Bates, the DELTA LRP PI. Similarly, the 'research uptake' PhD candidate, Ms Violet Murunga, will be directly supervised by the thematic leader, Prof. Collins Ouma, and co-supervised by Prof. Bates and Dr Justin Pulford (DELTA LRP Deputy PI). Thus, the progress of the PhD candidates will be directly monitored by senior DELTA LRP team members who will be in position to intervene as necessary to ensure project deliverables are met. The DELTA LRP PI and Deputy PI will be in a strong position to communicate potential threats to project deliverables and/or

timeframes arising from PhD-related performance to the LRP stakeholders at the earliest opportunity if any such issues do eventuate.

Relevant data are not accessed, data collection opportunities are missed or data collection is duplicated.

A wide range of data collection activities, informing diverse objectives, will take place during the course of the DELTAS Africa initiative. Examples include routine reporting of standard progress and performance indicators by each consortia to AESA, consortium-level data collection relevant to their respective programmes and DELTAS LRP specific data collection. The DELTAS LRP programme needs to be aware of relevant data from existing sources, have the means to access them, as well as the awareness and means to ‘tag on’ to routine- or non-LRP specific data collection opportunities as they arise. Any failure to access available data, or data-collection opportunities, may undermine the effectiveness of the LRP or result in unnecessary duplication of data collection efforts. To mitigate this risk, the LRP Deputy PI (Dr Pulford) will maintain a close dialogue with Ms Evelyn Namubiru-Mwaura, AESA Strategy & Policy Manager, and Ms Josephine Karuri, AESA M&E Manager, and will oversee all LRP-specific data collection activities. Dr Pulford, in consultation with Ms Namubiru-Mwaura and Ms Karuri, will identify all known, accessible data sources within the DELTAS initiative and inform LRP colleagues. In this way, potentially relevant data sources can be identified, accessed (where appropriate) and incorporated into the respective LRP study designs. In addition, Dr Pulford will communicate planned LRP data collection activities to Ms Namubiru-Mwaura and Ms Karuri well in advance in order to coordinate with AESA or consortia-related data collection activities and/or to integrate with planned activities where possible.

Learning opportunities are missed due to poor communication

A primary purpose of the DELTAS LRP is to identify and share relevant ‘learnings’ as they emerge in order to inform continuous programme planning and improvement during the course of the DELTAS Africa initiative. Potential learning opportunities will be lost if emergent lessons are not communicated to the right audiences at the right time. To mitigate this risk, the LRP team will establish and maintain multiple communication and reporting channels during the course of the project. This includes the provision of quarterly newsletters to all stakeholders, annual ‘learning’ reports, an interim ‘aims and objectives’ report timed to

inform the DELTAS mid-term review, peer-reviewed publications, presentations at annual DELTAS meetings and conference presentations as appropriate. The LRP team plan to implement quarterly meetings with AESA and are committed to the general principle of sharing any findings of immediate relevance to stakeholders at the earliest opportunity. In addition, the LRP team will continue to share findings from non-LRP programmes with relevant DELTAS stakeholders as appropriate and as evidenced by the recent circulation of RMSS project reports.

ANNEX 1: RESEARCH ASSISTANT POSITION DESCRIPTION

Job Description

Post:	Research Assistant (francophone)
Department:	International Public Health
Location:	Liverpool School of Tropical Medicine
Responsible to:	Justin Pulford, Senior Lecturer

The **Liverpool School of Tropical Medicine** is one of the few academic organisations with expertise in conducting research into the effectiveness and impact of capacity strengthening. LSTM's Capacity Research Unit (CRU) is led by Professor Imelda Bates who, along with her team, is responsible for research into the technical design, implementation and tracking of capacity strengthening activities in health and development programmes. The CRU team work in collaboration with funders of research and development projects, as well as with researchers, implementers and decision-makers in many countries, predominantly in sub-Saharan Africa.

We are recruiting a Research Assistant to support a number of CRU projects, particularly the DELTA Learning Research Programme. The DELTA LRP is a four year programme which aims to produce research-based learning from the DELTA research capacity building initiative about how to train and develop world-class researchers, equitably foster their careers and collaborations and promote research uptake. The RA will primarily contribute to the Research Training theme of the programme. The successful candidate will also contribute to CRU's other projects which aim to build research capacity of partner organisations, at both the individual and institutional level, using a variety of evidence-informed approaches.

Key Duties

- With other team members, identify research training needs and existing African-based courses (including on-line) for African researchers at all career stages, document training quality and opportunities for synergy among African training providers, and promote a systematic approach to embedding high-quality courses within African institutions.
- Establish and maintain effective working relationships with project partners
- Routinely collect evidence on Anglophone and Francophone DELTA awardees relating to which strategies are effective for strengthening research training in African settings
- Use in-depth methods, such as site-visits and interviews, to explore emerging themes in detail
- Conduct literature reviews and develop or adapt data collection tools for use during visits to African institutions to assess existing capacity.
- With other CRU team members, conduct visits to African institutions to identify existing capacity and solutions to address capacity gaps.
- Produce or contribute to project progress reports for submission to clients.
- Liaise with other CRU team members, to ensure cross-fertilisation with other CRU projects.

- Draft articles for publishing in scientific journals and/or abstracts for presentation at international conferences
- Attend and contribute to CRU team meetings.
- Represent the CRU as appropriate to raise the Unit's profile both within LSTM and externally.

Person Specification

Criteria	Competency	Essential/ Desirable
Education & training	Masters degree in a health or health related discipline	E
Experience	Ability to develop data collection methods to capture qualitative and quantitative data.	E
Skills and abilities	Fluency in French	E
	Excellent organizational skills, especially setting priorities, managing time, attention to detail and working to and meeting deadlines	E
	Excellent written and verbal communication skills	E
	Excellent interpersonal skills with ability to work both collaboratively and independently	E
	Proficient in MS Office Software especially Excel and Word and PowerPoint	E
Knowledge	Understanding of capacity building and health systems programmes in developing countries	D
	Knowledge of research processes involved in capacity strengthening	D
	Familiarity with software for analyzing qualitative data	D
Approach	Demonstrate a confident, enthusiastic, positive and energetic approach, with a willingness to get involved in all aspects of the projects	E
	Able to work independently and as part of a team	E
Circumstances	Availability for travel overseas, including approximately 6 weeks per year at partner institution in France (Paris)	E

ANNEX 2: PROJECT ROLES AND RESPONSIBILITIES AND TERMS OF REFERENCE

Roles & Responsibilities, LRP Colleagues

Principal Investigator, Imelda Bates:

- Provide technical assistance to the deputy PI and/or programme members as required.
- Participate in the development of programme workplans, milestones and deliverables.
- Review programme reports and publications and provide feedback as required.
- Provide final approval to all workplans, milestones and deliverables.
- Participate in all interactions with the LRP advisory board and steering group members.
- Provide high level support and intervention where required to ensure deliverables are met in accordance with agreed timeframes.
- Provide all interim and final reports to project funders.

Deputy Principal Investigator, Justin Pulford:

- Establish and maintain effective communication with the LRP team and all programme partners, including advisory board members, AESA, AFIDEP, Institut Pasteur, DFID and the Wellcome Trust.
- Facilitate the overall development of programme workplans, milestones and deliverables in consultation with the PI, theme leaders, advisory board and project partners.
- Monitor programme activities against agreed deliverables and timeframes.
- Facilitate meetings as required and/or stipulated in support of programme activities and deliverables.
- Coordinate and streamline cross-theme activities.
- Ensure completion of programme-level workplans, milestones and deliverables in accordance with agreed timeframes.
- Provide technical support to PhD students and line manage research assistant
- Review theme-specific reports and publications and provide feedback as required.
- Amalgamate theme-specific publication strategies and identify complementary programme-level publications in consultation with the PI, theme leaders and advisory board.
- Ensure completion of programme-level publications in accordance with agreed review and submission dates.

Administration, Lorelei Silvester, Denise Wellings:

- Provide general administrative support to LRP team members and partners as required.
- Organise meetings as required.
- Monitor expenditures against budget on a monthly basis.
- Prepare and disseminate programme-level financial reports in accordance with agreed deliverables and reporting dates.
- Ensure the LRP complies with all relevant LSTM policies and procedures.
- Facilitate the recruitment and selection of the two PhD students and the research assistant.

Research Theme Leaders, Rachel Tolhurst, Golbahar Pahlavan, Collins Ouma:

- Lead the development of theme-specific workplans, milestones and deliverables in consultation with the PI, deputy PI, advisory board and project partners.
- Draft theme-specific publication strategy, ensuring staggered outputs, in consultation with the PI, deputy PI and advisory board.

- Assist LSTM in the advertisement and recruitment of respective PhD students or research assistant.
- Provide supervision and technical support to respective PhD students/research assistant, ensuring compliance with all relevant organisational and programme policies and procedures.
- Ensure completion of theme-specific workplans, milestones and deliverables in accordance with agreed timeframes.
- Ensure completion of theme-specific manuscripts in accordance with agreed review and submission dates.
- Participate in programme level meetings, workshops and dissemination activities and/or provide relevant theme-specific information to programme partners as required.

PhD Students (Millicent Liani & Violet Murunga), Research Assistant (to be determined):

- Develop theme-specific study-design, data collection and analysis methodologies in consultation with their respective supervisor, PI, deputy PI, advisory board and project partners.
- Lead the required ethical approval processes for their respective study/data collection plan in consultation with their supervisor and deputy PI.
- Collect theme-specific data and conduct analysis using approved methodologies in consultation with their respective supervisor.
- Contribute to theme-specific manuscript and report preparation as directed by their respective supervisor.
- Participate in programme level meetings, workshops and dissemination activities and/or provide relevant theme-specific information to programme partners as directed by their respective supervisor.

Terms of Reference, LRP Advisory Panel Members

Advisory board functions:

- Participate in the development of programme workplans, milestones and deliverables by providing high level inputs based on past experience and expertise.
- Act as a sounding board for research approaches and emerging findings.
- Provide strategic advice on mitigating potential or actual obstacles to LRP completion and to facilitating the greatest possible impact from LRP findings.
- Provide oversight to identify inter-theme links and exploit synergies within and beyond LRP, especially within their diverse networks.
- Review draft publications/outputs to enhance quality; guide publication and dissemination strategies.

Management and support:

- The aforementioned activities will primarily be completed by desk review and/or participation in scheduled conference calls.
- Advisory panel members may be approached for individual comment if an issue arises in which it is known he/she has a particular expertise.
- LSTM will endeavour to provide sufficient notice (minimum of 2 weeks) for all activities and will limit the expected contribution of each advisory panel member to a maximum of 15 working days across the duration of the LRP.
- LSTM will share background documents, publications and reports relating, or relevant to, the DELTA LRP with all advisory board members and ensure they are sufficiently informed to meaningfully contribute in their advisory capacity.

Terms of Reference, LSTM-AESA LRP Partnership

LSTM will work closely with AESA by:

- Involving AESA in all LRP stages including designing methods, data collection and tools, on-site visits, data analysis and production of outputs, and in LRP team meetings
- During the inception phase, establish a close working relationship with key individuals in AESA including the Director, and staff responsible for strategic planning and M&E
- Throughout the LRP, support AESA colleagues to take forward high-level strategic issues that are important for science in Africa but which are beyond the scope of the LRP
- Including AESA in the development of the LRP publication plan, in the preparation of manuscripts as appropriate (based on mutually agreed publication plan) and in the dissemination of project outputs (e.g. technical reports, policy briefs)

AESA's contribution to LRP:

- Participate in the development of programme workplans, milestones and deliverables by providing high level inputs based on past experience and expertise.
- Act as the central liaison between LRP team members and DELTAS consortia.
- Have a process for considering high-level (i.e. institutional, national, regional) issues emerging from the LRP, whom to share them with and how best to do this.
- Provide information such as programme documents, workplans and M&E data to LRP team. AESA staff, particularly those involved in strategy and M&E, will therefore need to work closely with LRP
- Assist with the recruitment and selection of PhD students.
- Dissemination of LRP findings within and beyond DELTAS is critical. AESA, therefore, will assist with communicating LRP findings to deltas participants, and supporting LRP sessions at annual DELTAS meetings and at relevant international meetings.

ANNEX 3: PHD SCHOLARSHIP POSITION DESCRIPTIONS

Post: PhD Scholarship, Equitable Careers

Responsible to: Dr. Rachel Tolhurst, LSTM, Liverpool, UK.

Summary of role: **Complete a PhD examining barriers and enablers to gender equitable scientific career pathways in African research institutions.**

Background: The DELTAS Learning Research Programme (LRP) is a four year project, which aims to produce research-based learning from the DELTAS research capacity building initiative about how to train and develop world-class researchers, equitably foster their careers and collaborations, and promote research uptake. One of the three key objectives of the project, to be achieved through this PhD is to generate and share robust evidence about how to promote equitable career pathways for internationally competitive African researchers including women and other under-represented groups. Female scientists are increasingly under-represented at each stage of the scientific career ladder and women are significantly under-represented among African academic staff and decision-making bodies. Little is known about career outcomes for other under-represented groups (e.g. people with disabilities; ethnic, religious or regional minorities).

Potential questions to be addressed include:

- Where are the critical leak points along the career pathway? What could help under-represented groups to transition across these points successfully?
- Do current policies match their needs and those of their employers and how are they implemented in practice?
- Are there any biases in the current criteria and processes for selecting and promoting individuals with potential to be excellent researchers and/or research leaders? How can the processes for PhD selection and researcher promotion be improved to identify early and equitably those who will eventually demonstrate 'research excellence'?

Main duties: To work under the supervision of LSTM researchers to design, conduct and write-up a mixed methods but primarily qualitative PhD study on the barriers and enablers to gender equitable career pathways in health research in African research institutions. Specific tasks to be conducted with the support of supervisors include:

- Design and conduct literature searches, collect and analyse literature and write literature reviews on gender equitable career pathways in research internationally and in Africa specifically
- Design a study guided by the literature review to explore the issue of gender equitable career pathways in African research institutions participating in the DELTAS programme
- Design instruments appropriate to the study

- Draft ethics protocols for the study for the LSTM Research Ethics Committee and appropriate local ethics review boards and respond to queries
- Collect data and/or constitute a small research team as per study requirements and conduct training and supervision of data collection activities
- Conduct analysis of all data and use this as a basis for writing PhD thesis
- Draft a minimum of 2 papers based on PhD literature reviews and data
- Contribute to the development of other research outputs such as web-pages and blogs
- Participate in annual training and other related activities as part of PhD requirements
- Attend LRP meetings (usually on virtual basis – e.g. through Skype) wherever required
- Attend and present findings (as they emerge) to annual DELTAS meetings and other appropriate forums.

Duration: The PhD scholarship will be for a duration of three years, commencing in the second half of 2016.

Eligibility: Only citizens of African nations will be considered for this role.

Location: This is an 'off-site' LSTM PhD scholarship. The successful candidate will be based at an appropriate African research institution to be determined based on the country of residence and affiliation of the successful candidate.

Award: The scholarship includes course fees, living stipend and a training allowance.

Application: If you are interested in applying, please submit: 1) a completed application form (template attached); 2) two academic references (template attached); 3) an 'expression of interest' letter detailing how you meet the listed 'person specification' criteria; 4) a curriculum vitae; and 5) copies of tertiary level educational certificates.

All documents should be submitted by email to: capacityphd@lstmed.ac.uk

Closing date: All applications must be received by Friday 27th May 2016, 12 midnight GMT

Person Specification:**PhD in gender equitable career pathways in health research in Africa**

Criteria	Competencies	Essential Desirable	Assessment
Education & Training	Masters in a social science discipline (such as sociology, anthropology, development studies, geography, Public Administration, management or women's studies) with a specific component focusing on gender and/or institutional or human resource development, and a research skills component.	E	Application Form/CV
Experience	Experience in conducting research in the area of gender equity (including a Masters' research project)	E	Application Form, Assessment and Interview
	Health or development research experience in an African country.	D	
	Experience in academic paper writing/ evidence of published paper authorship	D	
Skills & Abilities	Gender and equity analysis.	E	Assessment and Interview
	Applied qualitative research skills.	E	
	Good communication skills.	E	
	Excellent academic writing skills in English.	E	
	Windows-based computing skills (spreadsheets, word processing).	E	
	Demonstrable analytic skills.	E	
	Attention to detail.	E	
	Institutional analysis	D	
	Research-grant proposal writing.	D	
	Basic quantitative analysis skills.	D	
	Skills in using qualitative data analysis software.	D	
Knowledge	Gender and development or management in low or middle income countries.	E	Assessment and Interview
	Human resources and/or institutional development in low and middle income countries	E	
Special Aptitude	Diplomacy - able to work with a range of people in a multicultural environment.	E	Assessment and Interview
	Adaptable.	E	
	Ability to work independently.	E E	

	Enthusiastic approach to work.		
Circumstances	Must be willing to travel overseas occasionally	E	
	Must be based at an African University or research institution	E	

Post: PhD Scholarship, Research Uptake

Responsible to: Prof. Collins Ouma, African Institute for Development Policy (AFIDEP), Nairobi, Kenya.

Summary of role: **Complete a PhD thesis examining barriers and enablers to health research uptake in an African context.**

Background: The DELTAS Learning Research Programme (LRP) is a four-year project, which aims to produce research-based learning from the DELTAS research capacity building initiative. One of the three key objectives of the project, to be achieved through this PhD programme, is to generate and share robust evidence about how to promote effective research uptake. In Africa, research uptake for decision-making is weak due to supply- and demand-side bottlenecks. Much research is untimely, not pro-poor and irrelevant to knowledge needs of decision-makers and the public because of limited interaction between producers and users of research when conceptualizing research questions. Supply-side research is fragmented across many scientific journals and researchers lack skills to synthesise and package it appropriately for decision-makers. Research competes with values, politics and personal interests to inform policy decisions and policymakers may lack motivation and skills to access, appraise and apply research findings. There is limited evidence about the most effective strategies (e.g. social media, private sector partnerships) to close the gap between research generation, policies and programmes.

Potential questions to be addressed include:

- How are pro-poor priorities incorporated (or not) into DELTAS health research programmes?
- What mechanisms work best or do not work best for research uptake and what is the strength of the evidence generated?
- What are the contextual and individual factors that have enabled some researchers to be highly successful in influencing policy and research uptake?

Main duties: To work under the supervision of LSTM and AFIDEP researchers to design, conduct and write-up a mixed methods PhD study examining barriers and enablers to health research uptake in an African context. Specific tasks to be conducted with the support of supervisors include:

- Design and conduct literature searches, collect and analyse literature and write literature reviews on research uptake internationally and in Africa specifically
- Design a study guided by the literature review to explore the issue of research uptake in African research institutions participating in the DELTAS programme
- Design instruments appropriate to the study
- Draft ethics protocols for the study for the LSTM Research Ethics Committee and appropriate local ethics review boards and respond to queries
- Collect data and/or constitute a small research team as per study requirements and conduct training and supervision of data collection activities
- Conduct analysis of all data and use this as a basis for writing PhD thesis

- Draft a minimum of 2 papers based on PhD literature reviews and data
- Contribute to the development of other research outputs such as web-pages and blogs
- Participate in annual training and other related activities as part of PhD requirements
- Attend LRP meetings (usually on virtual basis – e.g. through Skype) wherever required
- Attend and present findings (as they emerge) to annual DELTAS meetings and other appropriate forums.

Duration: The PhD scholarship will be for a duration of three years, commencing in the second half of 2016.

Eligibility: Only citizens of African nations will be considered for this role.

Location: This is an 'off-site' LSTM PhD scholarship. The successful candidate will be based at AFIDEP, Nairobi, Kenya. However, consideration may be given to an alternative host institution located elsewhere in Africa depending on the country of residence and affiliation of the successful candidate.

Award: The scholarship includes course fees, living stipend and a training allowance.

Application: If you are interested in applying, please submit: 1) a completed application form (template attached); 2) two academic references (template attached); 3) an 'expression of interest' letter detailing how you meet the listed 'person specification' criteria; 4) a curriculum vitae; and 5) copies of tertiary level educational certificates.

All documents should be submitted by email to: capacityphd@lstmed.ac.uk

Closing date: All applications must be received by Friday 27th May 2016, 12 midnight GMT

Person Specification:**PhD in health research uptake in an African context**

Criteria	Competencies	Essential Desirable	Assessment
Education & Training	Masters in a relevant discipline (e.g. sociology, anthropology, communication, development studies, geography, public administration or management)	E	Application Form/CV
Experience	Health or development research experience in an African country. Experience in academic paper writing/ evidence of published paper authorship	D D	Application Form, Assessment and Interview
Skills & Abilities	Applied qualitative research skills. Good communication skills. Excellent academic writing skills in English. Windows-based computing skills (spreadsheets, word processing). Demonstrable analytic skills. Attention to detail. Institutional analysis Research-grant proposal writing. Basic quantitative analysis skills. Skills in using qualitative data analysis software.	E E E E E D D D D	Assessment and Interview
Knowledge	Communication or knowledge transfer skills and processes. Human resources and/or institutional development in low and middle income countries	D D	Assessment and Interview
Special Aptitude	Diplomacy - able to work with a range of people in a multicultural environment. Adaptable. Ability to work independently. Enthusiastic approach to work.	E E E E	Assessment and Interview
Circumstances	Must be willing to travel overseas occasionally	E	